

# Spindle ball bearing HY S 6205 E TA P4+

16.07.2024



## Components

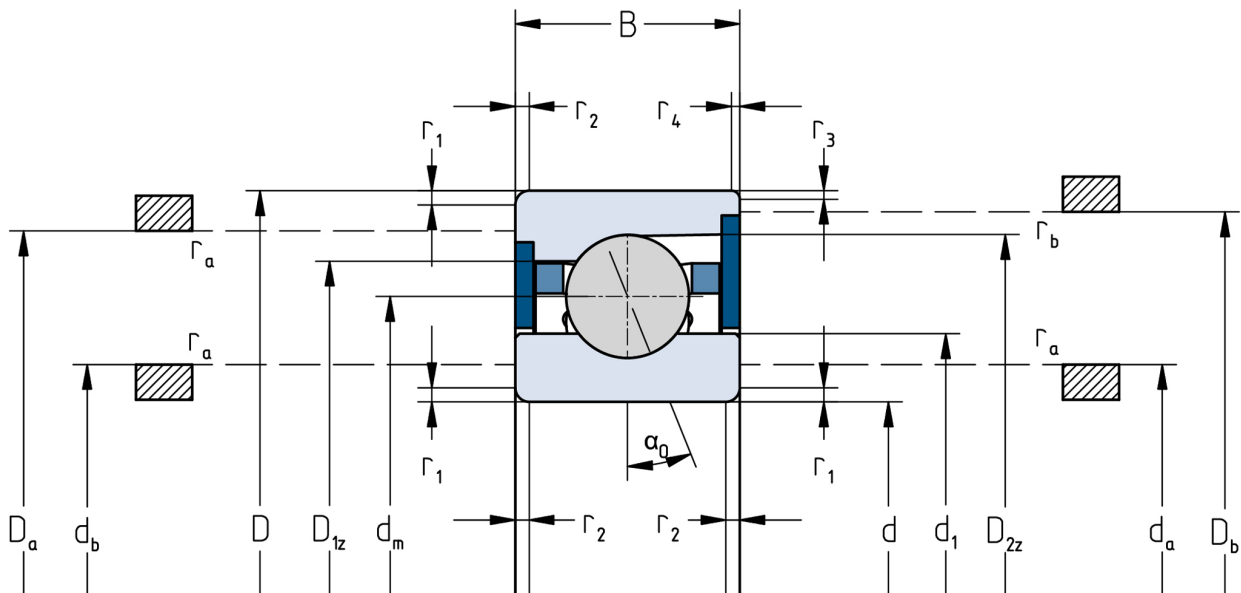
Bearing designation:	HY S 6205 E TA
Bearing design:	S
Series / size:	6205
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	25 x 52 x 15 mm

## Load data

Static load capacity	$C_{0r}$ : 11600 N
Dynamic load capacity	$C_r$ : 18200 N
Fatigue load limit	$C_U$ : 438 N
Speed limit	$n_{grease}$ : 34500 1/min
Speed limit	$n_{oil}$ : 46000 1/min
Light preload	L: 150 N
Axial rigidity	$C_{ax}$ : 114 N/ $\mu$ m
Medium preload	M: 450 N
Axial rigidity	$C_{ax}$ : 175 N/ $\mu$ m
Heavy preload	S: 900 N
Axial rigidity	$C_{ax}$ : 234 N/ $\mu$ m
Spring preload	Ff: 830 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 25 mm	Oiling nozzle position	$d_f$ : 36.8 mm
Outer diameter	D: 52 mm	Pitch circle diameter	$d_m$ : 39.1 mm
Width of single bearing	B: 15 mm	Inner diameter of outer ring	$D_1$ : 44.1 mm
Ball diameter	$D_w$ : 7.938 mm	Undercut of associated component	$r_{a max}$ : 1 mm
Number of balls	Z: 13	Undercut of associated component (open side)	$r_{b max}$ : 0.6 mm
Chamfer (min)	$r_{1,2 min}$ : 1 mm	Abutment diameter inner ring	$d_{a,b min}$ : 30.2 mm
Chamfer (min), open side	$r_{3,4 min}$ : 0.6 mm	Abutment diameter outer ring	$D_{a,b max}$ : 47.9 mm
Outer diameter of inner ring	$d_1$ : 34 mm	Inner diameter of outer ring (open side)	$D_2$ : 47.2 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.11 kg
		Contact angle	Alpha 0: 25°



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.